

U.S. SERIAL NO: 07/867, 819
FILED: April 13, 1992
AMENDMENT

In the Claims

1. (four times amended) A peptide forming a linear epitope for a human autoantibody selected from the group of peptides of less than forty amino acids, wherein the sequence of the epitope begins with the amino acid numbered from the amino terminus followed by the listed amino acid sequence consisting of

the Ro/SSA epitopes: 30, MNRLHRFL (SEQ ID NO:37), 37, LCFGSEGGT (SEQ ID NO:38), 38, CFGSEGGT (amino acids 2-9 of SEQ ID NO:38), 41, SEGGTYIYKEQ (SEQ ID NO:39), 42, EGGTYIYKEQ (amino acids 2-11 of SEQ ID NO:39), 44, GTYYIYKEQ (amino acids 4-11 of SEQ ID NO:39), 44, GTYYI (amino acids 4-8 of SEQ ID NO:39), 76, EIKSFSQEGRT (SEQ ID NO:40), 78, KSFSQEGR (amino acids 3-10 of SEQ ID NO:40), 81, SQEGRTTKQ (SEQ ID NO:41), 84, GRTTKQEPM (SEQ ID NO:42), 106, STKQAAFKAV (amino acids 2-11 of SEQ ID NO:43), 105, ISTKQAAFKAVS (SEQ ID NO:43), 108, KQAAFKAV (amino acids 4-11 of SEQ ID NO:43), 111, AFKAVSEVC (SEQ ID NO:44), 126, FTFIQFKKDLKESMK (SEQ ID NO:45), 130, QFKKDLKE (amino acids 5-12 of SEQ ID NO:45), 138, SMKCGMWGRA (SEQ ID NO:46), 139, MKCGMWGRA (amino acids 2-10 of SEQ ID NO:46), 142, GMWGRALRKAIA (SEQ ID NO:47), 145, GRALRKAI (amino acids 4-11 of SEQ ID NO:47), 165, ALAVTKYKQRNGWSHKDLLRLSH (SEQ ID NO:48), 169, TKYKQRNG (amino acids 5-12 of SEQ ID NO:48), 173, QRNGWSHK (amino acids 9-16 of SEQ ID NO:48), 182, LLRLSHLKPSS (SEQ ID NO:49), 184, RLSHLKPS (amino acids 3-10 of SEQ ID NO:49), 199, TKYITKGW (amino acids [2-9] 3-10 of SEQ ID NO:71), 202,

H

U.S. SERIAL NO: 07/867, 819
FILED: April 13, 1992
AMENDMENT

ITKGWKEV (amino acids [5-12] 6-13 of SEQ ID NO:71), 210, HELYKEKA (SEQ ID NO:50), 212, LYKEKALSV (SEQ ID NO:51), 216, KALSVETEKLLKYL (SEQ ID NO:52), 222, TEKLLKYL (amino acids 7-14 of SEQ ID NO:52), 224, KLLKYLEA (SEQ ID NO:53), 229, LEAVEKVKRTKDE (SEQ ID NO:54), 234, KVKRTKDE (amino acids 6-13 of SEQ ID NO:54), 257, HLLTNHLKSKEVWKALLQEMPL (SEQ ID NO:55), 263, LKSKEVWK (amino acids 7-14 of SEQ ID NO:55), 264, KSKEVWKA (amino acids 8-15 of SEQ ID NO:55), 265, SKEVWK (amino acids 9-14 of SEQ ID NO:55), 280 ALLRNLGKMTA (SEQ ID NO:56), 283, RNLGKMT (amino acids 4-10 of SEQ ID NO:56), 285, LGKMTANS (SEQ ID NO:57), 308, LCNEKLLKKARIHPFHI (SEQ ID NO:58), 313, LLKKARI (amino acids 6-12 of SEQ ID NO:58), 315, KKARIHPF (amino acids 8-15 of SEQ ID NO:58), 330, TYKTGHGLRGKLKWRPDE (SEQ ID NO:59), 331, YKTGHGL (amino acids 2-8 of SEQ ID NO:59), 352, ALDAAFYK (SEQ ID NO:60), 355, AAFYKTFKTVEPTGKRFLLA (SEQ ID NO:61), 379, ASMNQRVLGS (SEQ ID NO:62), 365, EPTGKRFL (amino acids 11-18 of SEQ ID NO:61), 398, AMCMVVTR (SEQ ID NO:63), 414, AFSDEMVP (SEQ ID NO:64), 420, VPCPVTTD (SEQ ID NO:65), 433, VLMAMSQI (SEQ ID NO:66), 445, TDCSLPMI (SEQ ID NO:67), 449, LPMIWAQKTNTPA (amino acids 3-15 of SEQ ID NO:68), 472, TFAGGVHPAI (SEQ ID NO:69), 472, TFAGGVHP (amino acids 1-8 of SEQ ID NO:69), 481, IALREYRKKMDIPAKL (SEQ ID NO:70), 484, REYRKKMD (amino acids 4-11 of SEQ ID NO:70).

2. (twice amended) A peptide of claim 1 consisting of between four and twenty five

H

U.S. SERIAL NO: 07/867, 819
FILED: April 13, 1992
AMENDMENT

amino acids.

3. (twice amended) A peptide of claim 2 reactive with anti-Ro/SSA polyclonal antibodies.

10. (twice amended) A peptide of claim 1 labelled with a compound selected from the group consisting of dyes, fluorescent labels, chemiluminescent labels, enzymes, and radioactive labels.

11. (twice amended) A peptide of claim 1 immobilized onto a substrate.

12. (five times amended) A method for screening patients for autoantibodies to Ro/SSA comprising reacting a biological sample with a peptide forming a linear epitope selected from the group of peptides of less than forty amino acids, beginning with the amino acid numbered from the amino terminus followed by the listed amino acid sequence consisting of

the Ro/SSA epitopes: 30, MNRLHRFL (SEQ ID NO:37), 37, LCFGSEGGT (SEQ ID NO:38), 38, CFGSEGGT (amino acids 2-9 of SEQ ID NO:38), 41, SEGGTYIYKEQ (SEQ ID NO:39), 42, EGGTYIYKEQ (amino acids 2-11 of SEQ ID NO:39), 44, GTYIYKEQ (amino acids 4-11 of SEQ ID NO:39), 44, GTYYI (amino acids 4-8 of SEQ ID NO:39), 76, EIKSFSQEGRT (SEQ ID NO:40), 78, KSFSQEGR (amino acids 3-10 of SEQ ID NO:40), 81, SQEGRTTKQ (SEQ ID NO:41), 84, GRTTKQEPM (SEQ ID NO:42), 106, STKQAAFKAV (amino acids 2-11 of SEQ ID NO:43), 105, ISTKQAAFKAVS (SEQ ID NO:43), 108, KQAAFKAV (amino acids 4-11 of SEQ ID NO:43), 111, AFKAVSEVC (SEQ ID NO:44), 126, FTFIQFKKDLKESMK (SEQ ID NO:45), 130, QFKKDLKE (amino acids 5-12 of SEQ ID

A

U.S. SERIAL NO: 07/867, 819
FILED: April 13, 1992
AMENDMENT

NO:45), 138, SMKCGMWGRA (SEQ ID NO:46), 139, MKCGMWGRA (amino acids 2-10 of
SEQ ID NO:46), 142, GMWGRALRKAIA (SEQ ID NO:47), 145, GRALRKAI (amino acids 4-
11 of SEQ ID NO:47), 165, ALAVTKYKQRNGWSHKDLLRLSH (SEQ ID NO:48), 169,
TKYKQRNG (amino acids 5-12 of SEQ ID NO:48), 173, QRNGWSHK (amino acids 9-16 of
SEQ ID NO:48), 182, LLRLSHLKPSS (SEQ ID NO:49), 184, RLSHLKPS (amino acids 3-10 of
SEQ ID NO:49), 199, TKYITKGW (amino acids [2-9] 3-10 of SEQ ID NO:71), 202,
ITKGWKEV (amino acids [5-12] 6-13 of SEQ ID NO:71), 210, HELYKEKA (SEQ ID NO:50),
212, LYKEKALSV (SEQ ID NO:51), 216, KALSVETEKLLKYL (SEQ ID NO:52), 222,
TEKLLKYL (amino acids 7-14 of SEQ ID NO:52), 224, KLLKYLEA (SEQ ID NO:53), 229,
LEAVEKVKRTKDE (SEQ ID NO:54), 234, KVKRTKDE (amino acids 6-13 of SEQ ID
NO:54), 257, HLLTNHLKSKEVWKALLQEMPL (SEQ ID NO:55), 263, LKSKEVWK (amino
acids 7-14 of SEQ ID NO:55), 264, KSKEVWKA (amino acids 8-15 of SEQ ID NO:55), 265,
SKEVWK (amino acids 9-14 of SEQ ID NO:55), 280 ALLRNLGKMTA (SEQ ID NO:56), 283,
RNLGKMT (amino acids 4-10 of SEQ ID NO:56), 285, LGKMTANS (SEQ ID NO:57), 308,
LCNEKLLKKARIHPFHI (SEQ ID NO:58), 313, LLKKARI (amino acids 6-12 of SEQ ID
NO:58), 315, KKARIHPF (amino acids 8-15 of SEQ ID NO:58), 330,
TYKTGHGLRGKLKWRPDE (SEQ ID NO:59), 331, YKTGHGL (amino acids 2-8 of SEQ ID
NO:59), 352, ALDAAFYK (SEQ ID NO:60), 355, AAFYKTFKTVEPTGKRFLLA (SEQ ID
NO:61), 379, ASMNQRVLGS (SEQ ID NO:62), 365, EPTGKRFL (amino acids 11-18 of SEQ
ID NO:61), 398, AMCMVVTR (SEQ ID NO:63), 414, AFSDEMVP (SEQ ID NO:64), 420,

A